Advisory Action Attachment

allowable subject matter

Claims 29, 33 and 36 are allowed.

remarks

With respect to Newman et al, applicant discusses slurry 76, slurry 93 and slurry 91. However, applicant's understanding of the scope and content of Newman et al is incomplete and inaccurate. In Newman et al, the cement board may be made using the glass fiber facing sheet and *only first cementitious slurry 76*.[1] When first cementitious slurry is used by itself, the first cementitious slurry is deposited on a first facing sheet and a glass fiber facing sheet is disposed on the deposited cementitious slurry. The glass fiber facing sheet comprises a melt blown fiber web and an open glass fiber facing scrim. The scrim has mesh openings. The melt blown fiber web, which partially covers the mesh openings of the scrim, is a porous web having openings. The glass fiber facing sheet is mechanically integrated into a surface portion of the cement board along the exposed surface of the scrim. During mechanical integration, the glass fiber facing sheet is pressed into the cementitious slurry so that the cementitious slurry is forced up through the mesh openings of the scrim of the glass fiber facing sheet.[2] The force of gravity then causes the cementitious slurry to sink back down away from the glass fiber facing sheet and form meniscuses within the mesh openings of the scrim. If the

[1] Applicant disagrees with this factual finding.
[2] With respect to applicant's quotation of col. 9 lines 44-49 (page 5 lines 3-7 of the response filed 6-16-08), applicant omits Newman et al's teaching to press the glass fiber facing sheet 10 (scrim 15 and melt blown fiber 20) into cementitious slurry 76. The penetration of the cementitious slurry into the melt blown fiber web occurs during the pressing step.

meniscuses are permitted to form, pitting or the formation of indentations may occur in the mesh openings. Newman et al prevents the undesirable formation of pitting or indentations and obtains a smooth cement board by using the melt blown fiber web. In particular, the **melt blown fiber web** prevents the cementitious slurry from sinking away from the glass fiber facing sheet (scrim 15 and melt blown fiber web 20). The **melt blown web fiber web** maintains a portion of the cementitious slurry *on the surface of* the glass fiber facing sheet 10 (scrim 15 and melt blown fiber web 20). The **melt blown fiber web** causes the slurry to window pane *over* the mesh openings *on the exterior of* the scrim of the glass fiber facing sheet 10 (scrim 15 and melt blown fiber web 20). The **melt blown fiber web** thereby forms a substantially planar bridge surface between transverse and longitudinal yarns of the scrim of the glass fiber facing sheet. In order for the meltblown fiber web to function as described above, the cementitious slurry must contact and at least partially penetrate **the melt blown fiber web.**[3] Applicant's response filed 6-16-08 fails to acknowledge that, when only cementitious slurry 76 is used, the cementitious slurry 76 contacts and at least partially penetrates the melt blown web.

Applicant emphasizes that Newman et al teaches "glass fiber facing sheet provides a smooth surface which is essentially free of pitting". More properly, Newman et al teaches that the "cement board" formed using the facing sheet having a scrim and a melt blown web with the lower basis weight of 2-30 g/m2 has a "smooth exterior

[3] From a review of applicant's response filed 6-16-08, it appears that applicant believes that there is no contact between the slurry 76 and the melt blown web 20.

surface with little or no pitting" (col. 2 lines 58-63). Newman obtains the "smooth cement board" (abstract, column 10, figure 8) because the glass fiber facing sheet comprising both scrim and melt blown web is pressed into cementitious slurry so as to obtain a cement board as shown in figure 8.

Applicant emphasizes that the melt blown web is applied to only one face of the scrim (response filed 6-16-08, page 5). Examiner emphasizes that Newman et al also teaches "A melt blown polymer web 20 is preferably joined to the glass scrim 15 on one face 45 of the scrim, but may be applied on both faces of the scrim." (col. 6 lines 1-3, emphasis added). When the melt blown web is applied on both faces the scrim, pressing the glass fiber facing sheet must extend the slurry through the openings in the lower melt blown web to reach the scrim and integrate mechanically with the scrim. Col. 6 lines 1-3 reveals that Newman et al disclosed and contemplated a melt blown web having openings sufficient in size to allow cementitious slurry to extend completely there through. Applicant ignores col. 6 lines 1-3 of Newman et al.

Applicant argues and examiner agrees that the process shown in figure 6 requires the use of cementitious slurry 76 (response filed 6-16-08, page 4). Examiner adds that the second cementitious slurry (second cementitious slurry 93) is optional and the additional low viscosity cementitious slurry (low viscosity cementitious slurry 91) is optional.

Applicant argues: "In the process disclosed at col. 9 lines 28-61, the slurry 91 is not disclosed as optional" (response filed 6-16-08, page 2). Applicant is incorrect. The process disclosed at col. 9 lines 28-61 may comprise the use of only first cementitious

slurry 76. Contrary to applicant's argument, Newman et al fails to require use of both slurry 76 and slurry 91.

Applicant argues: "... the disputed term, 'the cementitious slurry 76 or slurries' can not refer to slurries [93 and 91], as proffered by the rejection." (response filed 6-16-08, page 3). This argument is not persuasive. FIRST: Examiner took the position that the "second cementitious slurry" described at col. 3 lines 45-47 of Newman et al corresponds to the second cementitious slurry 93. See page 3 last line and page 4 first line of the final office action dated 4-16-08. SECOND: Examiner took the position that the "additional cementitious slurry" described at col. 3 lines 51-53 of Newman et al corresponds to the "cementitious slurry 91". See lines 1-2 on page 4 of final office action dated 4-16-08. THIRD: Contrary to applicant's assertions, examiner did *not* take the position that "the cementitious slurry 76 or slurries" means --the cementitious slurry 76 or slurries 93 and 91--. In the examiner's opinion, "the cementitious slurry 76 or slurries" (e.g. col. 9 lines 40, 44, 59, 62) describes (a) slurry 76, (b) slurry 76 and slurry 93, (c) slurry 76 and slurry 91 or (d) slurry 76, slurry 93 and slurry 91 because (1) col. 9 lines 28-61 of Newman et al discusses cementitious slurry 76, cementitious slurry 93 and cementitious slurry 91; (2) Newman et al teaches that the second cementitious slurry (second cementitious slurry 93) is optional (col. 3 line 45-47, col. 9 lines 36, 37); and (3) Newman et al teaches that the low viscosity additional cementitious slurry (low viscosity cementitious slurry 91) is optional (col. 3 lines 51-53, col. 9 line 30, 31). Applicant appears to desire a firewall between col. 3 lines 37-64 and col. 9 lines 1-67, col. 10 lines 1-11 of Newman et al. No such firewall exists.

Applicant argues that "the cementitious slurry 76 or slurries" means --the cementitious slurry 76 or slurries 76 and 93-- (response filed 6-16-08 pages 3 and 4). Newman et al is not limited to this narrow construction. Newman et al teaches "In the hardening of the cementitious slurry 76 or slurries, the cementitious material becomes hydrated." (col. 9 lines 62-63). The same phrase "cementitious slurry 76 or slurries" is used at line 40, line 44, line 59 and lines 62.[4] One of ordinary skill in the art would *not* have understood that "the cementitious slurry 76 or slurries" as being limited to "the cementitious slurry 76 or slurries 76 and 93". If "the cementitious slurry 76 or slurries" has the narrow meaning proffered by applicant, then the description of hardening "the cementitious slurry 76 or slurries" at col. 9 lines 62, 63 would exclude disclosure of hardening of slurry 91. Simultaneous requirement of slurry 91 and exclusion of disclosure of hardening slurry 91 makes no sense. Contrary to applicant's argument, "the cementitious slurry 76 or slurries" is not limited to "the cementitious slurry 76 or slurries 76 and 93".

On page 4 of the response filed 6-16-08, applicant states "The FR states, at P, 4, lines 19-20, 'The foundation for Applicant's arguments in the response filed 8-14-07, 9-4-07 and 11-5-07 is that Newman et al must use slurry 91.' However, Applicant's discussion is not based on such a foundation. Instead, the FR rejection correctly states that the slurry 91 is optional ...". This statement renders applicant's position on the use of slurry 91 as uncertain. In applicant's opinion, is the use of slurry

[4] It is noted that the description "the cementitious slurry 76 (and optionally cementitious slurry 93)" (col. 9 lines 36-37) is different and distinct from the description of "the cementitious slurry 76 or slurries" (col. 9 lines 40, 44, 59 and 62).

91 optional or not optional?

With respect to claim 22 and claim 27 of US Patent 6,054,205 to Newman et al, applicant states: "Moreover, if a cement skin were present, the claims would not be able to claim that the glass fiber facing sheet provides a smooth surface, and would not be able to claim the melt blown polymer web provides a substantially smooth exterior surface to said cement board" (response filed 6-16-08, page 4). This statement is irrelevant. Claims 17, 18 and 21-37 of this application 10/696,751 are being examined instead of claims 22 and 27 of US Patent 6,054,205.

Applicant argues: "... there is no description anywhere in the reference of a cement skin feature by using slurry 76 without the slurry 91" (page 4 of response filed 6-16-08). This argument follows applicant's factual finding that "The disclosure in Newman for making a cement skin appears at column 9, lines 30-35 ..." (amendment filed 12-27-08, page 12). Examiner agrees with applicant that Newman et al discloses a cement board comprising a cement skin and a glass fiber facing sheet comprising a scrim 15 and melt blown fiber web 20.

Applicant argues that col. 2 lines 43-49 expressly discloses how the melt blown web prevents the slurry 76 from sinking back down (response filed 6-16-08, page 5 and 6). Applicant is incorrect. Col. 2 lines 43-49 of Newman et al describes the mechanical interaction of the scrim and the slurry and is silent as to interaction between the melt blown web and the slurry.

Applicant states: "... the melt blown web prevents the slurry 76 from sinking back down when the slurry 91 is present on the facing sheet 10, and would prevent the slurry

76 from sinking back down the same way when the slurry 91 is not used.". (response filed 6-16-08, page 6). QUESTION: How does the melt blown web prevent slurry 76 from sinking? ANSWER: The melt blown fiber web prevents the slurry 76 from sinking back down because slurry 76 contacts and at least partially extends through the melt blown fiber web. If slurry 76 and the melt blown fiber web 20 do not contact (applicant's apparent position), it would be impossible for the melt blown web to prevent the slurry from sinking.

Applicant argues that Newman et al fails to disclose that cementitious slurry 76 has a low viscosity. Applicant comments that the optional slurry 93 is described as having a higher viscosity than slurry 76. In light of Newman et al's teaching that "...second cementitious slurry 93 when used has a higher viscosity ... than slurry 76" (col. 9 lines 25-26), Newman et al reasonably conveys the teaching that slurry 76 has a "lower viscosity" than that of slurry 93. Newman et al explicitly teaches cementitious slurry 91 as having a "low viscosity". Examiner agrees that there is no literal antecedent basis for cementitious slurry 76 as having a "low viscosity". However, each of slurry 76 and slurry 91 have a lower viscosity than slurry 93 and applicant fails to allege otherwise.

Applicant proffers that discrepancies depicted in Figure 8 and discussed in the Response filed December 27, 2007 should be used to limit the scope of the prior art to which Newman et al belongs. FIRST: With respect to a first alleged discrepancy between figure 8 and the specification of Newman et al, applicant asserted that figure 8 depicts the scrim 15 on top of the meltblown polymer web 20. Applicant remains

incorrect. Figure 8 of Newman et al illustrates the warp and weft of the scrim 15 and indicates the location of the thinner melt blown web 20 as being on the top surface of the scrim. SECOND: With respect to a second alleged discrepancy between figure 8 and the specification, applicant asserted that figure 8 depicts the scrim 15 in cross-section as being one yarn. Applicant remains incorrect. Figure 8 of Newman et al illustrates the warp and weft of the scrim 15 and indicates the location of the thinner melt blown web 20 as being on the top surface of the scrim 15. Applicant's apparent position that the scrim is one yarn is unreasonable in light of Newman et al's unambiguous disclosure that the scrim comprises transverse (weft) yarns and longitudinal (warp) yarns. THIRD: With respect to a third alleged discrepancy between figure 8 and the specification, applicant asserted the specification describes the facing sheet 72 used as a facing material for the cement board. This assertion identifies no discrepancy because Figure 8 illustrates two facing sheets. The lower facing sheet is identified as being facing sheet 72.

Applicant argues that the mere fact that a certain thing may result from a given set of circumstances is not sufficient. This argument is off-point. Newman et al's preferred embodiment of making a cement board is to use a glass fiber facing sheet comprising a scrim 15 and a melt blown web 20 having the lower basis weight of 2-30 g/m2 (Figure 1, col. 4 lines 5-8) and only first cementitious slurry 76 (col. 3 lines 37-61). Second cementitious slurry 93 is optional. The additional low viscosity cementitious slurry 91 is optional. When the glass fiber facing sheet is pressed into the cementitious slurry 76, contact and at least partial penetration of the openings of the porous melt

blown fiber web necessarily occurs. This not a possibility. It is a certainty. Examiner did not rely on Newman et al to meet the limitation of cement skin. Mathieu and Galer are not optional references. Mathieu and Galer are used to render obvious performing Newman et al's process (in contrast to being used to interpret Newman et al) such that Newman et al's facing sheet is embedded in cementitious material and a cement skin is formed. The word "obvious" instead of "interpret" is used in the sentence bridging pages 5 and 6 of final office action dated 4-16-08. Lack of literal antecedent basis in Newman et al for "cement skin" and any remote possibility that a "cement skin" is not formed when using slurry 76 is insufficient to establish a factual finding that Newman et al teaches avoiding the formation of a cement skin.

Applicant states "... there is no express disclosure that any slurry 76, 93 and 91 forms a cement skin" (response filed 6-16-08, page 9). More properly, there is no express disclosure in Newman et al that any slurry 76, 93 and 91 fails to form a cement skin.

With respect to Mathieu and Galer, applicant argues "... evidence of motivation must be directed to a motivation to adopt the way a prior art disclosure makes a cement skin and to combine that with or to modify the main or basic reference" (response filed 6-16-08, page 10). The way Mathieu and Galer form a cement skin is the same as the applicant's way - completely penetrating and submerging.

Applicant argues "A motivation to form a cement skin supplied by Mathieu can not be used to interpret Newman et al. by providing a cement skin that is deemed consistent with the Newman et al. disclosure. For example, the FR uses Mathieu to

interpret Newman et al ... "(response filed 6-16-08, page 10). This argument is irrelevant because Mathieu is not being used to interpret Newman et al.

On page 10 of the response filed 6-16-08, applicant refers to the following statement by the examiner: "The use of a single slurry 76 is consistent with the formation of a smooth cement board having a cement skin adjacent to an outer face". This observation by the examiner is reflective of the fact that applicant cannot prove that Newman et al fails to form a cement skin when using only slurry 76. The mere fact that result of failure to form a cement skin when using slurry 76 alone is possible is not sufficient.

Applicant argues "It would not be reasonable for a mesh of Mathieu to provide motivation to combine with or modify Newman et al., when Newman et al. regards a mesh as prior art to be improved upon..." (response filed 6-16-08, page 10). This argument is off-point. The glass fiber facing sheet (scrim and melt blown fiber web) of Newman et al is not being replaced with a mesh per se.

Applicant notes that the mesh in Mathieu has sufficiently large openings. The same is true of applicant's reinforcement fabric. Examiner does not understand applicant's claimed reinforcement fabric as being impermeable since claim 17 describes the reinforcement fabric as comprising an "open" mesh and "porous" nonwoven web.

Applicant argues "... evidence of motivation must be directed to a motivation to adopt something in prior art disclosures for making cement skin" (response filed 6-16-08, page 11). The way Mathieu and Galer form a cement skin is the same as the applicant's way - completely penetrating and submerging.

Applicant argues that the motivation to form a cement skin, when supplied by Galer, can not be used to interpret Newman et al. for teachings of a smooth cement board as being consistent with a cement skin. This argument is irrelevant because Galer is not being used to interpret Newman et al or prove that Newman et al's disclosure of a smooth cement board is consistent with a cement skin.

Applicant argues "... the only prior art cement skin process that could be the object of motivation by Galer to combine with or modify the main reference, is the one disclosed by Galer. No other secondary reference discloses a prior art cement skin process." (response filed 6-16-08, page 11). Examiner agrees with applicant that Galer discloses a cement skin process. In particular, Galer teaches making a cement skin by completely penetrating and submerging. However, applicant is incorrect that Mathieu does not disclose a cement skin process. Contrary to applicant's arguments, Mathieu discloses a prior art cement skin process in which a cement skin is made by completely penetrating and submerging. The cement skin is formed when the embedment of the reinforcement fibers is just beneath the surfaces of the cementitious core at a depth of submersion of mesh of from example about 0.5 mm to about 2.0 mm. Applicant ignores Mathieu's teaching to submerge the reinforcing mesh component (mesh, scrim, nonwoven fabric, etc.).

Applicant argues that applicant's method claims distinguish over the prior art process of Galer that uses a riser of a step to produce the cement skin. Applicant is incorrect. Claim 17 is generic to using a riser during the penetrating step.

Applicant argues "... Canada, Murphy and Palmer do not contain sufficient disclosure to propose that the mesh 14 and non-woven web 20 would form a cement skin." (response filed 6-16-08, page 11). This argument is off-point. Penetration of the glass fiber facing sheet by cementitious slurry is desired by Newman et al and complete penetration by and embedment of a fiber sheet, whether it be woven or non-woven, in cementitious material is suggested by Mathieu and Galer. Furthermore, claim 17 recites "hydrophilic material" and each of Canada, Murphy and Palmer teach "hydrophilic material". Moreover, Canada, Murphy and Palmer recommend to one of ordinary skill in the cement art to use "hydrophilic material" on fibers whether in the form of a fabric (Canada), scrim (Murphy) or fabric or fiber (Palmer). Murphy recommends to one of ordinary skill in the cement art to use "hydrophilic material" when embedment of a scrim is desired. Canada recommends applying hydrophilic material to fibers of a fabric *even when* only partial penetration of the fabric by a cementitious slurry is desired. Examiner maintains that, when penetration of a fiber sheet is desired as in Newman et al, Galer and Mathieu, it would have been obvious to apply hydrophilic material to such a sheet.

In summary, applicant's arguments filed 6-16-08, while responsive, are not persuasive that the 103 rejection of claims 17, 18, 21-28, 30-32, 34, 35 and 37 should be withdrawn.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Steven D. Maki/
Primary Examiner, Art Unit 1791

Steven D. Maki
July 14, 2008